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- (71) Applicant (for all designated States except US): UN-
ODRILL AS [NO/NO]; Fjordgt. 72, N-7010 Trondheim
(NO).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): RÖDLAND, Arild
[NO/NO]; Fjordgt. 72, N-7010 Trondheim (NO).
- (74) Agent: CURO AS; Box 38, N-7231 Lundamo (NO).

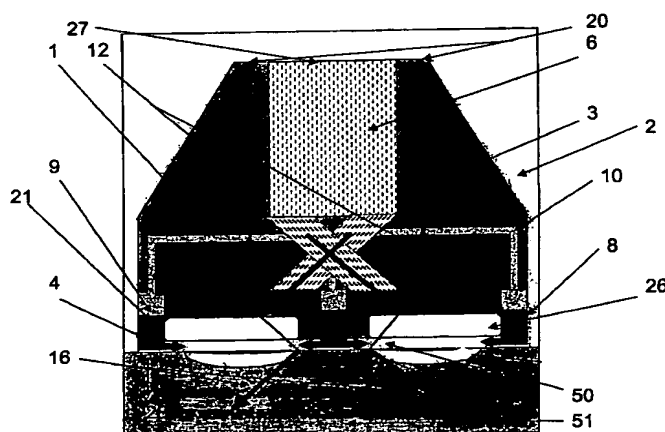
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(54) Title: METHOD, DRILLING MACHINE, DRILL BIT AND BOTTOM HOLE ASSEMBLY FOR DRILLING BY ELECTRICAL DISCHARGE PULSES



(57) Abstract: Machine for ground drilling, with a circulating fluid, by the utilization of electric discharge generated by high-voltage pulses between electrodes. It may comprise:- A drill-bit 1 with electrodes movable relative to each other, so that bottom-hole physical contact be secured for all the electrodes 4 on all bottom-hole topographies. - Pointed hydraulic nozzles for jetting the fluid, to remove primary cuttings and with pressure expansion across the nozzles 7 at no less than 4MPa. - A high-voltage pulse-generator deployed down-hole at a minimum distance from the drill-bit 1. - A rotating or oscillating bit causing the borehole cross-sectional excavation to occur, and electric discharge between a plurality of electrodes situated on the bit face along one or a few radii and tangents. - A bottom hole assembly for annular hole-making with core storage, transportation, down-hole closed loop discharge fluid circulation. A discharge fluid storage may be incorporated. A drilling method is also described.



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